

CLAIMS – CLEAN COPY AS AMENDED

16. A method of obtaining a solution of calcium ions from lime, comprising
- (i) treating the lime with an aqueous solution of a polyhydroxy compound of the formula $\text{HOCH}_2(\text{CHOH})_n\text{CH}_2\text{OH}$ in which n is 1 to 6; and
 - (ii) optionally separating insoluble impurities from the solution resulting from (i).
17. A method according to claim 16, wherein the lime is carbide lime.
18. A method according to claim 17 wherein insoluble impurities are separated from the solution resulting from (i).
19. A method according to claim 16, wherein the lime is a product of the calcining of limestone or dolomite.
20. A method as claimed in claim 16, wherein the polyhydroxy compound is glycerol.
21. A method according to claim 16, wherein the sugar alcohol is sorbitol, mannitol, xylitol, threitol or erythritol.
22. A method according to claim 21 wherein the polyhydroxy compound is sorbitol.
23. A method as claimed in claim 16, wherein the polyhydroxy compound is employed as 10%-80% by weight solution in water.
24. A method as claimed in claim 21, wherein the polyhydroxy compound is employed as a 10% to 60% by weight solution.

25. A method as claimed in claim 20, wherein the glycerol is employed as a 60% to 80% by weight solution in water.
26. A method as claimed in claim 16, wherein the amount of lime is such as to provide 3-12 parts by weight per 10 to 80% by weight of the polyhydroxy compound.
27. A method as claimed in claim 16 effected at a temperature of 5°C-60°C.
28. A method of producing a calcium containing product comprising the steps of:
- (i) preparing a solution of calcium ions according to the procedure of any one of claims 1 to 12; and
 - (ii) adding to the solution from (i) a precipitating agent which causes precipitation of the desired calcium containing product.
29. A method as claimed in claim 28, wherein the precipitating agent is carbon dioxide and the product obtained is precipitated calcium carbonate.
30. A method of producing precipitated calcium carbonate from carbide lime comprising:
- (i) treating the carbide lime with an aqueous solution of sorbitol to extract calcium from the carbide lime;
 - (ii) separating the insoluble impurities from the solution resulting from (i); and
 - (iii) treating the solution with carbon dioxide.